NEW STUDY: Air Quality and Health Improved in the Atlanta Region after Power Plant and Motor Vehicle Controls

Cleaner Air; Fewer Emergency Room Visits for Asthma and other Lung Disease

Boston, MA April 19, 2018. Do air pollution control measures actually work? A new rigorous study published today by the Health Effects Institute (HEI)¹ at www.healtheffects.org says YES.

After a number of national and state air pollution control measures taken in and around Atlanta, Georgia, Dr. Armistead (Ted) Russell and colleagues from Georgia Institute of Technology and Emory University examined whether such regulations targeting power plants and mobile sources were effective in reducing pollutant emissions, improving air quality, and ultimately improving health. Their comprehensive report, Impacts of Regulations on Air Quality and Emergency Department Visits in the Atlanta Metropolitan Area, 1999–2013, finds that air quality actually improved substantially – and fewer people visited hospital emergency departments as a result.

Although it is assumed that air quality actions, once adopted, will improve air quality and health, there are few studies that actually test that. This new study is the latest in a series of studies in HEI’s Accountability Research program (https://www.healtheffects.org/accountability) which systematically test whether actions intended to improve air quality and health actually produce that effect.

Using an innovative approach, Dr. Russell and colleagues compared the actual conditions during 1999 to 2013 with carefully-estimated quantitative projections of emissions, air quality, and emergency department visits that likely would have occurred in the absence of six national and state level regulatory programs.

¹ The Health Effects Institute is an independent, non-profit research institute funded jointly by the US Environmental Protection Agency, industry, foundations and development banks to provide credible, high quality science on air pollution and health for air quality decisions.
The investigators found that air pollutant emissions and ambient concentrations decreased over the study period for most pollutants and estimated that the pollutant levels were lower than what would have been expected without regulatory actions (a “counterfactual” scenario).

Changes in Source Emissions

Changes in Ambient Air Pollutant Concentrations

Their analysis also found that the observed improvements in air quality were associated with fewer emergency department visits for asthma and other respiratory disease compared with what would have been expected without the regulations. And their data suggested that the benefits increased over time as the air pollution control measures were fully implemented and emissions went down.
In its independent review of the report, the HEI Review Committee noted that the study was an ambitious application of HEI’s accountability framework as it encompassed a broad suite of regulatory programs designed to reduce multipollutant emissions from power plants and mobile sources in Georgia and nearby states.

“This was an extraordinarily careful analysis of just what happened in Atlanta after these many, complex actions were taken,” said Dan Greenbaum, HEI’s President. “And the good news is that all of the effort put in by government and the private sector appears to have paid off in cleaner air and better health,” he added.

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